SENATE PUBLIC HEALTH, WELFARE & SAFETY

I prepared an estimate of the economic impact to Montana's dairy pool if there should be a widely-publicized food-borne illness attributed to unpasteurized milk that causes a significant decline in retail milk sales in Montana. Such an incidence could reduce consumer confidence in pasteurized milk, even though it would not be the source of illness.

If such an incident were to occur, Montana pool milk that normally was bottled and sold in Montana's retail markets would instead likely be sold in bulk form to out-of-state markets. This would change (decrease) the value of the milk collectively purchased from Montana's pool. The Milk Control Bureau establishes minimum prices for raw milk sold in the Montana on a monthly basis. Prices are established based upon end-use. The prices for each discussed below.

- Milk bottled for sale in Montana is priced at the Montana Class I price, the highest price.
- Milk received by Montana's pool milk handlers that is beyond the handler's bottling/processing
 needs under these circumstances would almost certainly be sold to out-of-state markets in bulk
 form. The value added to the pool for such sales is whatever price the market will bear at the
 destination, less the cost of freight. As a result, this price is considerably lower than the
 Montana Class I price.

Average Price Differences Between Montana Class I and Net Value Received from Out-of-State Bulk Milk Sales (High/Low):

- The average price spread between the two prices from January 2013 through January 2015 is \$7.08/cwt. On average, out-of-state bulk sales are priced approximately 30% lower for those months.
- Looking at calendar years 2013 and 2014 and ignoring two months that might be considered
 outliers, the average price spread is \$6.21/cwt. On average, out-of-state bulk sales are priced
 approximately 26% lower for those months.

In 2014, the Montana pool produced 26,041,227 lbs of milk per month. Of that 53.35% (13,891,867 lbs/month or 138,918.67 cwt/month) was utilized as Class I milk – sold and consumed in Montana as fluid milk.

Potential Impact (based on the assumptions discussed above):

- For every 1% decrease in retail sales of milk in Montana, Montana dairy farmers would receive \$8,600 \$9,850/month less as a result of the incident.
 - A significant event would likely have impact much higher than a 1% decrease of sales in the initial month.
- The decrease in retail milk sales would likely persist for a period of time.
 - A best case scenario (for Montana's pool) might be an impact with a one month "half-life" (50% of the impact persisting into Month 2, 25% of the impact persisting into Month 3, etc.). Over the period of 12 months following an incident, the impact would be approximately two times the economic impact of the initial month.

The table below provides an illustration of the economic impact to the Montana pool (decrease in amount paid to Montana dairy farmers) resulting from a 7.5% decrease in retail milk sales occurring in the first month following the described incident. This single-digit decline in sales would still result in sizeable negative economic impact. Actual attenuation of the impact is not known; the actual impact could be higher depending upon the circumstances.

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	Month 1: Est. % Impact	Impact over 12 Month Period - Low	Impact over 12 Month Period - High
	7.50%	\$128,968.51	\$147,713.93
Month	% Impact Relative to Month 1	Potential Impact per 1% Initial Impact - Low (\$)	Potential Impact per 1% Initial Impact - High (\$)
1	100.0000%	\$64,500.00	\$73,875.00
2	50.0000%	\$32,250.00	\$36,937.50
3	25.0000%	\$16,125.00	\$18,468.75
4	12.5000%	\$8,062.50	\$9,234.38
5	6.2500%	\$4,031.25	\$4,617.19
6	3.1250%	\$2,015.63	\$2,308.59
7	1.5625%	\$1,007.81	\$1,154.30
8	0.7813%	\$503.91	\$577.15
9	0.3906%	\$251.95	\$288.57
10	0.1953%	\$125.98	\$144.29
11	0.0977%	\$62.99	\$72.14
12	0.0488%	\$31.49	\$36.07
	199.9512%	\$128,968.51	\$147,713.93

129,000 \$148,000

I made inquiries to Meadow Gold and Darigold, asking if their companies have observed decreases in milk sales in other states or markets following incidences of food-borne illness attributed to unpasteurized milk – or pertaining to food safety scares that may provide an applicable comparison. I have also inquired about the duration of such impacts. I have not received any response from Meadow Gold. The Darigold representative I talked to did not have information, but indicated that an impact occurring as a result of a significant and highly publicized event was plausible.

Something else to consider is the impact on consumer buying of multiple incidences over a period of time. The impacts might stack to some degree, and the likelihood of permanent declines in milk consumption would increase.